

K041624

JUL 16 2004

## SECTION 2.0 – SUMMARY OF SAFETY AND EFFECTIVENESS

June 15, 2004

### 2.1 General Information

#### 2.1.1 Company Name, Address, and Telephone Number

Lake Region Manufacturing, Inc. (LRM)  
340 Lake Hazeltine Drive  
Chaska, MN 55318  
Telephone: (952) 448-5111 Fax: (952) 448-3441

Contact Name: Karen Mortensen  
Senior Regulatory Compliance Specialist

#### 2.1.2 Device Trade Name/Proprietary Name

LRM produces guidewires on an OEM basis for other manufacturers, kit assemblers, and distributors. Consequently there are a large number of trade and proprietary names not including or associated with LRM. LRM has no proprietary names of its own to be included with this submission.

#### 2.1.3 Device Common Names/Usual Names and Classification Names

These devices are commonly known as guides, guidewires, or spring guidewires. The current classification names, and product codes are Angiographic Guidewire (74HAP), Catheter Guidewire (74DQX), and Radiological Catheter Guidewire (74JAJ).

#### 2.1.4 Establishment Registration Number: 2126666

#### 2.1.5 Classification of Devices

The classification names listed above were originally classified as Class II devices by the Neurology (84HAD), Cardiovascular (74DQX) and Radiology (90JAJ) Review Panels, respectively.

#### 2.1.6 Applicability of Performance Standards

LRM has determined that no mandatory performance standards have been established for these devices under Section 514 of the Medical Amendments to Federal Food, Drug, and Cosmetic Act or by any subsequent regulatory action. LRM has also determined that there are no applicable voluntary standards.

## 2.2 Labels, Labeling, and Advertising

LRM produces cardiovascular and vascular guidewires on an OEM basis for other manufacturers, kit assemblers, and distributors. There is no direct distribution by LRM. Changes to the customer controlled labels, labeling, or promotional material are at their discretion, including the resolution of any resulting regulatory obligations. A fraction of the total production bears LRM controlled labels and labeling.

## 2.3 Statement of Availability

This summary is being included in the Premarket Notification submission in lieu of a statement of availability.

## 2.4 Device Description

2.4.1 Utilizing a proprietary process, LRM produces a PTFE coated stainless steel steerable core. The proximal portion of the core wire is coated with PTFE to provide lubricity and improve wire handling. A platinum alloy coil, placed within the confines of the outer coil and over-wrapping the distal core section, provides radiopacity in the distal tip. The coils are secured in their location by solder, which is attached to the core. The proximal end of the outer coil is attached to the core with braze, and the distal end has a mid-point of the outer coil which is attached to the core with solder (applicable designs). The product is offered with a shapeable straight tip or in a preshaped configuration. The guidewires are coated with MDX (silicone) or with hydrophilic coating. The guidewires are bound by the following parameters:

Outside Diameter:	.014"
Lengths:	175cm – 300cm
Tips:	Straight or shaped with various tip flexibilities
Flexibility:	Floppy to Extra Support

### 2.4.2 Engineering Specifications

The design specifications are the same for the proposed device as they are for the LRM predicate devices [reference 510(k)s K970376 and K011968]. The finished device with hydrophilic coating must meet the same basic design criteria and also meet the criteria established for the hydrophilic properties of the guidewire.

## 2.5 Substantial Equivalence Data

### 2.5.1 Background Information

The table below lists the differences between the predicate device and the proposed device. Testing was done to ensure the changes to the device met the predetermined acceptance criteria.

Item	Proposed Device Differences from LRM Predicate cleared under 510(k) K970376
Raw Materials	Core: No change to raw material Coil: No change to raw material Coating: <b>Addition of hydrophilic coating as alternate coating (reference K991898 Microvena Corporation HyTek™ Guidewire for predicate of a legally marketed device within the same classification for the same intended use that employs the hydrophilic coating in its design.)</b>
Assembly Process	No change to assembly processes
Physical Characteristics	No change
Labeling/IFU	<b>The only change to the label or IFU will be wording specific to the hydrophilic properties of the guidewire.</b>
Intended Use	No change to intended use
Anatomical Sites	No change
Target Population	No change
Performance Testing	No change
Safety Characteristics	No change
Biocompatibility	No change
Risk Analysis	No change

### 2.5.2 Non-Clinical Tests

In order to demonstrate equivalence of the proposed device, LRM performed testing to established requirements. Test pieces were tested and inspected according to established specific inspection criteria requirements for visual/tactile, dimensional and mechanical attributes. The results of these tests demonstrated the functionality and performance characteristics of these guidewires are comparable to the currently marketed devices.

## 2.6 Qualification and Biocompatibility Test Data

### 2.6.1 Design Control

LRM is in conformance with the design control procedure requirements as specified in 21 CFR 820.30. Risk analysis was completed by means of a Failure Mode and Effect Analysis (FMEA) and all verification and validation activities resulted in the ability to demonstrate that the predetermined acceptance criteria were met.

#### 2.6.2 Material/Product/Process Qualification

LRM has formal quality systems in place to assure that each product manufactured with the hydrophilic coating remains equivalent to the predicate products, and that the changes will not have an adverse affect on the safe and effective use of the product. The quality systems include Engineering Change Order Review, Material Qualification, Product Qualification, and Process Qualification. These controls are applied to each product size/group.

#### 2.6.3 Biocompatibility Testing

Biocompatibility testing has been performed on the material components of this device. This testing, along with a market history of proven biocompatibility, establishes acceptable biocompatibility for this device.

### 2.7 Packaging and Sterilization Information

LRM produces guidewires on an OEM basis for other manufacturers, kit assemblers, and distributors. There is no direct distribution by LRM. A portion of the production is private label, sterile packaged to customer specifications, a fraction of that product is provided sterile to the customer.

The single packaged hydrophilic coated guidewire is placed in a dispenser and then into a Tyvek®/poly pouch. The packaged product may be packaged as five or ten pouchs in a shelf carton, which are typical packaging configurations.

There will be no changes to the sterilization process for the portion of packaged product shipped sterile to the customer. For the product that is shipped bulk, the packaging design and sterilization process parameters are the customer's responsibility. LRM will not recommend that its customers modify their packaging or sterilization procedures as a result of this submission.

### 2.8 Intended Use Statement

For use in angiographic procedures to introduce and position catheters and interventional devices within the coronary and peripheral vasculature.

**NOTE: The modification of this device does not alter its intended use.**



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

JUL 16 2004

Lake Region Manufacturing, Inc.  
c/o Ms. Karen Mortensen  
Senior Regulatory Compliance Specialist  
340 Lake Hazeltine Drive  
Chaska, MN 55318-1029

Re: K041624  
Trade Name: PTCA Steerable Hydrophilic Guide  
Regulation Number: 21 CFR 870.1330  
Regulation Name: Guide, Catheter  
Regulatory Class: Class II (two)  
Product Code: DQX  
Dated: June 15, 2004  
Received: June 16, 2004

Dear Ms. Mortensen:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

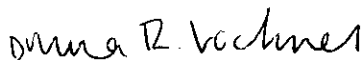
If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.


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Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050. This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (301) 594-4646. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97) you may obtain. Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/dsma/dsmamain.html>

Sincerely yours,



 Bram D. Zuckerman, M.D.  
Director  
Division of Cardiovascular Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

K041624

## Indications for Use

510(k) Number (if known):

Device Name: PTCA Steerable Hydrophilic Guidewire

Indications For Use:

For use in angiographic procedures to introduce and position catheters and interventional devices within the coronary and peripheral vasculature.

Prescription Use   X    
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Diana R. Vachon

Division Sign-Off)  
Division of Cardiovascular Devices

510(k) Number K041624